SHORT COMMUNICATIONS

Humming-bird hawk-moth *Macroglossum stellatarum* (L.) (Lep.: Sphingidae) probing the ground—A humming-bird hawk-moth was seen hovering and probing the ground at Micheldever Wood, Hampshire, along the path between grid reference SU533366 and SU531386 at ~15.30 h BST on 22. viii.1996. The ground here comprised a mixture of compacted earth and, predominantly, stony gravel, with sparse ground-lying vegetation. The moth was tracked and observed for several minutes during which it would hover and probe the ground, fly for short bursts without deviating to seek nectar, and resume probing 3–10 m further NNW. Intermittently however, hovering was followed by periods of settling on the spot for several seconds with wings in resting posture. These periods were always followed by a short burst of flight before hovering and probing resumed. Attempts to approach the insect, whether hovering or settled, elicited similar flights. During one period of settling the moth was netted with the aim of determining its sex, but forced its way out through a hole and flew 10–12 m along the path in an erratic course before resuming its prior behaviour. A second capture attempt revealed it to be male.

M. stellatarum is a mainly diurnal nectar feeder that has been recorded at many wild and cultivated plants (Skinner, 1984; Herrera, 1992; Pitt-Payne, 1996). Yet despite searching several works on moth biogeography and behaviour (Ford, 1955; South, 1977; Heath & Emmet, 1979; Skinner, 1984; D'Abrera, 1986; Pittaway, 1993) the author could find no mention of *M. stellatarum*, or other Palaearctic Sphingidae, feeding at the ground; although some tropical species will drink eye secretions and some North American hawk-moths will probe rotting animal remains (Pittaway, 1993).

Ground feeding is better known in butterflies which use it to obtain moisture and salts, notably sodium chloride (Adler & Pearson, 1982). Sodium is needed for proper muscle function, and for egg production (Porter, 1992) where its precise physiological role is poorly understood (House, 1974; Happ, 1984). However, as most of the sodium for egg production is obtained during copulation from the males, the reserves are more seriously depleted and in need of replenishment in this sex (Porter, 1992). Rainwater collecting in puddles elutes salts from the ground, which become concentrated as the water evaporates, and it is such damp patches that are most attractive (Sevastopulo, 1974).

Middle Wallop, the nearest meteorological station, recorded 0.6 mm of rain on 20. viii.1996, a trace on 21. viii, and prior to this 0.2 mm on 17.viii. The ground at Micheldever Wood was not visibly damp when the moth was probing, but comparable rainfall there may have been sufficient to dissolve surface salts. Sodium chloride is hygroscopic, and should *M. stellatarum* be able to secrete water from its proboscis to cope with viscous nectars (see Kevan & Baker, 1983), as its wide range of nectar sources might suggest, then hygroscopically bound water could lessen the amount of fluid the moth must secrete.

In day-flying moths, scent may be relatively unimportant for locating nectar (Kevan & Baker, 1983), and an instance of *M. stellatarum* trying to feed from coloured lights (Bigger, 1960) demonstrates that visual cues can suffice. However, the stimulus for ground-probing, and the means by which moisture and salts are detected, remain to be established. Low-level flying and probing for moisture may exemplify a generalized response to increased humidity or decreased barometric pressure, and the habit of male honeydew-feeding purple hairstreak butterflies *Quercusia quercus* L. (Lycaenidae) to forage lower than usual in the canopy during sultry weather is well known (Ford, 1957). Many butterflies can "taste" salt with

their feet (Adler & Pearson, 1982) and comparable sense organs in *M. stellatarum* would enable the moth to detect surface salt when settling. The observation that a proximity of salt solution will elicit flexing motions of the antennae in purple emperor butterflies *Apatura iris* L. (Martin C. White, *pers. comm.*), on the other hand, suggests that some species may be able to detect short-range gradients in the concentration of airborne salt molecules.—LEONARD WINOKUR, 8 Parklands Close, Chandlers Ford, Eastleigh, Hants SO53 2EQ.

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A new locality for *Cosmotettix caudatus* (Flor) (Hemiptera: Cicadellidae), with a note on its ecology—The known distribution of *C. caudatus* in Britain is very scattered, with single localities previously reported in Buckinghamshire, Lancashire, Northamptonshire, Oxfordshire and Somerset (Kirby, 1992). The ecology of the insect is poorly known. Previous British records are from wet areas and water margins. Le Quesne (1969) reports it from "grasses in damp places". Ossiannilsson (1983) gives *Carex vesicaria* L. as a foodplant, and its habitat as "tall sedge-bogs".

In 1990 I found *C. caudatus* at a second Northamptonshire locality, Racecourse Farm Fields SSSI, National Grid Reference TF018042. My first visit to this site was made on 10.vi.1990, close to dusk on a cold evening. Examination of a large (approximately two metres across) patch of *Carex hirta* L. revealed a considerable number of *Cicadula persimilis* (Edwards), many of them quite high in the vegetation and easily caught by sweeping. There were smaller numbers of a similarly sized but paler insect without obvious markings on the head. These occurred only low down in